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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/591,696	07/16/2007	Kazumasa Takeuchi	1303.46565X00	3031
20457 7590 10/15/2008 ANTONELLI, TERRY, STOUT & KRAUS, LLP 1300 NORTH SEVENTEENTH STREET SUITE 1800 ARLINGTON, VA 22209-3873				
EXAMINER THOMPSON, CAMIE S				
ART UNIT		PAPER NUMBER		
1794				
MAIL DATE		DELIVERY MODE		
10/15/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/591,696

Applicant(s)

TAKEUCHI ET AL.

Examiner

Camie S. Thompson

Art Unit

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on July 7, 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,6 and 8-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,6 and 8-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9/5/2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/S508)
Paper No(s)/Mail Date 5/18/08
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Applicant's amendment and accompanying remarks filed July 7, 2008 are acknowledged.
2. Examiner acknowledges amended claims 1, 6 and 8.
3. Examiner acknowledges cancelled claims 3-5 and 7.
4. Examiner acknowledges newly added claims 17-18.
5. The rejection of claim 3 under 35 U.S.C. 112, second paragraph is rendered moot due to applicant's cancellation of claim 3.
6. The rejection of claims 1-7, 9-11 and 14-16 under 35 U.S.C. 102(a) as being anticipated by Takeuchi et al., U.S. Patent Number 7,138,174 is overcome by applicant's submission of the certified translation of the foreign priority document and applicant's amendment.
7. The rejection of claim 8 under 35 U.S.C. 103(a) as being unpatentable over Takeuchi et al., U.S. Patent Number 7,138,174 in view of JP 11-335652 is overcome by applicant's submission of the certified translation of the foreign priority document.
8. The rejection of claims 12-13 under 35 U.S.C. 103(a) as being unpatentable over Takeuchi et al., U.S. Patent Number 7,138,174 in view of Mizuno et al., U.S. Patent Number 7,157,506 is overcome by applicant's submission of the certified translation of the foreign priority document.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

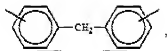
(c) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 1-2, 6, 9-11, and 14-18 are rejected under 35 U.S.C. 102(e) as being anticipated by anticipated by Takeuchi et al., U.S. 7,138,174.

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C.

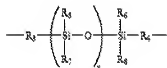
102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Takeuchi discloses a prepreg laminate comprising a fiber base impregnated with a resin composition. The reference discloses a polyamide-imide resin having the chemical structure



Included in the polyamide-imide. Additionally, the reference discloses that the resin composition comprises an imide resin with an epoxy resin as per instant claims 1, 9 and 14 (see abstract and column 3, lines 14-25). The reference also discloses that the epoxy has two or more

glycidyl groups as per instant claim 10 (see column 8, lines 30-65). The reference also discloses that the fiber base has a thickness of 10 to 200 microns, which encompasses the 5-50 microns as required by instant claim 1 (see column 10, lines 1-12). It is disclosed in column 3 that the imide resin is preferably a siloxane modified polyamide imide as per instant claims 2-6. It is disclosed in column 9, lines 44-50 that an antioxidant is used. Example 5 discloses a phosphorus containing compound in the composition as per instant claim 11. Column 7, lines 54-60 of the reference discloses that the epoxy is present in an amount of 1-200 parts by weight relative to 100 parts by weight of the polyamide imide resin as per instant claim 11. A metal-clad laminate sheet is obtained by stacking several prepregs together with metal foil on either or both sides of the stack and subjecting the resulting stack to heat and pressure as per instant claim 15 (see column 10, lines 34-59). Column 11 discloses that a circuit board is formed by forming a circuit on the metal foil of the metal clad laminate as per instant claim 16. The reference discloses a polyamide imide resin with siloxane modification with the structure



wherein R₃ is a divalent organic group and would read on instant claim 7. Claims 5-6 and 14 are product-by-process claims. Even though product-by-process claims are limited and defined by the process, patentability is based on the product itself. The patentability of a product does not depend on its method. See MPEP 2113.

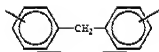
Double Patenting

11. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

12. Claims 1-2, 9-11 and 14-18 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-16 and 25-27 of U.S. Patent No. 7,138,174. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of both the present application and the patented reference recite a prepreg comprising a fiber base, which is glass cloth, impregnated with a resin composition that comprises a polyamide-imide resin that is siloxane modified and a thermosetting resin, epoxy resin with two or more glycidyl groups. Additionally, both the present claims and the claims of the patented reference recite a polyamide-imide resin that has the chemical structure



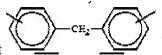
, present in the structure of the polyamide-imide. The patented reference does not recite that the fiber base has a thickness of 5-50 microns. However, this is an optimizable feature. The thickness of the fiber base affects insulation properties of the laminated sheet. Therefore, it would have been obvious to one of ordinary skill in the art to have the thickness of the fiber base at 5-50 microns in order to have a laminated sheet that has excellent thermal shock resistance.

13. Claims 8 and 12-13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art does not provide for the recited prepreg further including a resin represented by general formula 9 and the resin further contains a hindered phenol-based or organic sulfur compound-based antioxidant. The closest prior art, Takeuchi,

fails to teach or suggest a prepreg having a resin with general structure 9 wherein the resin also includes an antioxidant.

Response to Arguments

14. Applicant's arguments filed July 7, 2008 have been fully considered but they are not persuasive. Applicant argues that the Takeuchi reference does not teach or suggest a prepreg comprising a fiber base wherein the fiber base has a thickness of 5-50 microns. Takeuchi discloses in column 9, line 64-column 10, line 12 that the fiber base is preferably glass cloth and has a thickness of 10 to 200 microns, which encompasses the thickness of the present claims. Additionally, applicant argues that Takeuchi does not disclose a prepreg comprising a resin structure comprising a polyamideimide resin wherein the resin includes a structure represented by general formula 1. Takeuchi discloses in column 3 a polyamide-imide resin used to



impregnate a fiber base for a prepreg. It is disclosed in column 4 that is included in the polyamide-imide resin. The rejection is maintained.

Conclusion

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Camie S. Thompson whose telephone number is (571) 272-1530. The

examiner can normally be reached on Monday through Friday from 7:30 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, D. Lawrence Tarazano, can be reached at (571) 272-1515. The fax phone number for the Group is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information systems, call 800-786-9199 (IN USA or CANADA) or 571-272-1000.

/D. Lawrence Tarazano/

Supervisory Patent Examiner, Art Unit 1794